```
/* SAS program to perform logistic regression, using PROC GENMOD.   */
/* Data consist of ingots prepared with different heating and       */
/* soaking times.  Response variable for each ingot is readiness    */
/* to roll.  Data are from Cox (1970, The analysis of binary data,  */
/* Halsted Press) and are analyzed in the SAS documentation.        */

options nocenter ls=72;
data ingots;
       input heat soak y n @@;
       output;
       cards;
     7  1.0  0  10    7  1.7  0  17    7  2.2  0  7    7  2.8  0  12
     7  4.0  0   9   14  1.0  0  31   14  1.7  0 43   14  2.2  2  33
    14  2.8  0  31   14  4.0  0  19   27  1.0  1 56   27  1.7  4  44
    27  2.2  0  21   27  2.8  1  22   27  4.0  1 16   51  1.0  3  13
    51  1.7  0   1   51  2.2  0   1   51  4.0  0  1
    ;
proc genmod;
  model y/n = heat soak / dist = bin
                          link = logit
                          lrci;
run;
```

The GENMOD Procedure

Model Information

Data Set	WORK.INGOTS
Distribution	Binomial
Link Function	Logit
Response Variable (Events)	y
Response Variable (Trials)	n
Observations Used	19
Number Of Events	12
Number Of Trials	387

Criteria For Assessing Goodness Of Fit

Criterion	DF	Value	Value/DF
Deviance	16	13.7526	0.8595
Scaled Deviance	16	13.7526	0.8595
Pearson Chi-Square	16	13.5431	0.8464
Scaled Pearson X2	16	13.5431	0.8464
Log Likelihood		-47.6728	

Algorithm converged.

Analysis Of Parameter Estimates

Parameter	DF	Estimate	Standard Error	Likelihood Ratio 95% Confidence Limits		Chi-Square
Intercept	1	-5.5592	1.1197	-7.9011	-3.4533	24.65
heat	1	0.0820	0.0237	0.0349	0.1293	11.95
soak	1	0.0568	0.3312	-0.6629	0.6674	0.03
Scale	0	1.0000	0.0000	1.0000	1.0000	

Analysis Of Parameter Estimates

Parameter	Pr > ChiSq
Intercept	<.0001
heat	0.0005
soak	0.8639
Scale	

NOTE: The scale parameter was held fixed.